



Brooke Hill Academy's Curriculum Intent and Implementation for Mathematics

Maths Intent

At Brooke Hill Academy our aim is to develop children into confident mathematicians who are able to use mathematics as a tool in a wide range of activities both in and out of school. Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically and a sense of enjoyment and curiosity about the subject. Throughout the school the children are involved in mathematical activities which cover the 5 key areas: Number and the Number System; Calculations; Solving Problems; Measure, Shape and Space and Handling Data.

Within the EYFS, teaching ensures that sufficient time is dedicated to each new concept, enabling pupils to gain the fluency and reasoning skills needed to solve problems in familiar contexts. Early, hands on, encounters with mathematics build firm foundations upon which to build a more formal approach that is gradually introduced in Year 1 and develops progressively to Year 6. Staff development is given high priority to ensure that teachers are confident in delivering all areas of the mathematics curriculum. A yearly overview for each year group suggests the teaching time needed for every block of learning, whilst remaining flexible in line with the needs of pupils.

The mathematics scheme of work closely follows the 'White Rose Programme of Study'. National Curriculum objectives are blocked into units of work and broken down into small steps that build secure understanding. This includes 'revisit' lessons that take into account potential lost learning during the lockdown periods. Class teachers deliver the content in the suggested order so that children's understanding grows rapidly, yet securely.

A high priority is given to teaching children mental strategies and written methods to support their ability to calculate independently and use both basic and more advanced numeracy skills as they move through school.

Maths Implementation

Daily lessons follow a mastery approach, in which children are taught via whole-class, interactive teaching. Collaborative discussion is embedded, alongside high-quality questioning, short tasks, explanation and demonstration. Stem sentences scaffold learning and support children to internalise important mathematical processes and knowledge. The use of visual representations, such as bar models and part-whole models, supports children's understanding when solving number problems.

Following teacher explanation, pupils apply their learning in a series of independent tasks. Learning is deepened during every lesson, with carefully crafted challenges that work to encourage pupils' independence in reasoning and problem-solving. All classrooms are equipped with practical resources to develop and support

mathematical understanding. Regular, in-the-moment, feedback is given to all pupils within lessons and, where further support is needed, children are put in support groups to work with an adult or receive early intervention to address gaps in learning promptly. During KS2 assembly, a staff member/s will mark the books and complete an AFL marking sheet which informs further interventions and lessons.

High priority is placed on the development of key number facts and the four operations in order to avoid cognitive overload, thus enabling pupils to take on new concepts with ease. Pupils are encouraged to access the Times Tables Rock Stars online platform from Year2-6, in school and at home, to practise their times tables and increase their recall time. Reception and year one take part in time to count activities to build up their number knowledge. In Year 4, pupils undertake the statutory Multiplication Tables Check (MTC) which determines whether their recall of times tables is fluent, in readiness for Upper Key Stage 2. Teachers across school refer to the 'Whole School Calculation Policy' when planning lessons. This document, which was developed by the Subject Leaders in close consultation with staff, is key to ensuring consistency and progression in the teaching of written calculations across school.